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ABSTRACT

Inalienable possession (iposs) in Mandarin Chinese has traditionally been thought restricted to associative (genitive) phrases where the possessor is juxtaposed to the possessum. In addition to such phrases, this analysis looks at five other possibilities where intrinsically relational nouns arise: zero anaphora; double subjects; passive of bodily effect; discontinuous possessor construction; and retained object construction. In each case, the discussion involves meaning differences with regard to the genitive construction and the semantics of participating nouns. Although body parts and kin terms, the most typical inalienables, are each found in nearly all six structures, the presence of peripherally inalienable terms such as personal effects and even inalienable tokens casts doubt on the possibility of a formal definition for Mandarin iposs. This is one more instance of the non-bi-uniqueness of iposs, a cross-linguistic category that continues to resist a rigorous morpho-syntactic definition. Ways in which these findings bear on iconicity and prototype questions are discussed. (Contains 42 references.) (MSE)

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Inalienable Possession in Mandarin [1]

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Abstract

Inalienable possessession (iposs) in Mandarin has traditionally been thought restricted to Associative (genitive) phrases where the possessor is juxtaposed to the possessum. In addition to such phrases, this paper looks at five other possibilities where intrinsically relational nouns arise: Zero Anaphora, Double Subjects, Passive of Bodily Effect, Discontinuous Possessor Construction and Retained Object Construction. In each case the discussion involves meaning differences vis-à-vis the genitive construction and the semantics of participating nouns. Although body parts and kin terms, the most typical inalienables, are each found in nearly all six structures, the presence of peripherally inalienable terms like personal effects and even alienable tokens casts doubt on the possibility of a formal definition for Mandarin iposs. Here is one more instance of the non bi-uniqueness of iposs, a cross-linguistic category that continues to resist a rigorous morpho-syntactic definition. The paper concludes with a discussion of how the findings bear on iconicity and prototype questions.

Keywords: prototype, implicational hierarchy, inalienable possession, Mandarin, iconicity, Chinese

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1.0 Introduction[2]

It has become a truism that inalienable possession (iposs) within and across languages lacks bi-uniqueness and in other ways has proven intractable to a rigorous analysis based on the traditional criteria of necessity and sufficiency. Filmore (1968), Seiler (1983), and Nichols (1988), among others, have noted the inevitable inconsistencies in the "grammar" of iposs: virtually every language prevents us from developing for iposs nouns an iron-clad syntactic and semantic definition. The syntactic structures associated with iposs are often used for alienables too, e.g. the dative clitic plus definite article in Romance arises not only with body parts in a whole-part relation, but also with separable nouns co-occuring with a dative of interest. The semantic boundaries of iposs sub-types seem to vary cross-linguistically in unpredictable ways: some languages have a distinct morpho-syntax only for kin terms or only for body parts; others include both these categories along with clothing, personal implements, personality traits, emotions, and abstract nouns which assume a user or agent, such as 'language' and 'decision'.

Functionalists and typologists have tried to come to grips with this variation via hypotheses assuming implicational hierarchies and iconicity. For Haiman (1985), inalienables present a conceptually simpler link with their possessor than do separable nouns. The inalienable relation is built-in to the semantic structure of such nouns: their intrinsic relationality is taken for granted and is thus less complex than with alienables, which require that a possession relation be established (cf. Seiler (1983)). To this difference in conceptual distance there should correspond a difference in linguistic distance: inalienables are claimed to manifest equal or less linguistic material between themselves and their possessor, with "linguistic material" embracing a scale of morph > word boundary > morpheme boundary, as indicators of decreasing distance. After examining the data, we will consider the challenges which Mandarin poses for the iconicity hypothesis.

Another major cross-linguistic question is the semantic boundary of iposs, as well as the related issue of sub-categorization. ' Abstract Ns like *patience*, a person's name, a people's language: these are just a minimal sampling of marginal tokens which vary in their ±inalienable status, defined in terms of morpho-syntactic behaviour, both across languages and at times within a given language. Even with more representative tokens, languages manifest unpredictable patterns, e.g. the alienable right hand vs. inalienable left hand case mentioned in Lévy-Bruhl (1916) and Fillmore (1968). Clearly, by the traditional criterial-attribute method of classification (Langacker (1987)), iposs would never qualify as a universal. Yet, linguists have persisted in talking about it as a phenomenon observable across languages.

Mandarin displays both a lack of bi-uniqueness between inalienability and structure, and fluctuating treatment of marginal tokens. Our examination of six structures will reveal that none correlates uniquely with iposs, and yet all require consideration of iposs in their description.

2.0. Iposs structures in Mandarin

2.1. Associative phrases.

The standard structure for expressing possession in Mandarin is:

$$NP1_{possessor} + de + NP2_{possessum}$$

For example:

(1) ni de kuzi
I ASSOC trousers 'my trousers'

Chappell/Thompson (1992) label *de* an ASSOCIATIVE marker because literal possession is only one of the relations it may convey. For instance, In

(2) jiaokeshu de shouju
textbook ASSOC receipt 'textbook receipt.'

the link involves a clearly different type of modification.[3]

Earlier studies and textbook accounts routinely explained that *de* was optional and usually omitted with kin terms, but obligatory with other semantic classes of NP2s. In fact, the presence vs. absence of *de* depends on several other factors too, as Li (1959) and Chappell/Thompson (1992) point out. Working with the variable-rule model for multiple regression of Rand/Sankoff (1990), Chappell/Thompson found that these factors include (1) the distance of NP1 and NP2 from ego, i.e. the greater the distance, the more likely the presence of *de*, (2) combinatorial semantic or structural features, e.g. prenominal modification of NP2 disfavours use of *de*, and (3) information flow in discourse: a recently mentioned NP2 favours use of *de*; given NP2s disfavour it. Along the continuum of the semantics of NP2, they found that spatial orientation terms like *litou* 'inside' were even more likely to dispense with *de* than kin terms, which, as expected from previous studies, were more than twice as likely as body parts to occur without an intervening *de*.

Chappell/Thompson attribute the observed patterning to Haiman's iconicity principle, i.e. the more intimate the possessive relation, the more likely will be juxtaposition, without an overt associative morph.

The overall NP2 scale, however, poses some problems for this explanation. First, it is by no means obvious that some categories of NP2 present an intrinsically closer relationship with NP1. In what sense are institutions closer to their owners than body parts? Both institutions and body parts can be evoked without any overt possessive link, e.g.:

(3) suoyou danwei dou yao jiesan.
all unit all will disband 'All units will be disbanded.'

and

(4) zhei fu hua-shang zhi you yi ge gebo.
this CL painting-surface only have one CL elbow
'The painting consisted of just an elbow.'

The high incidence of institutions and other social groups occurring in associative phrases without *de* may be due to their frequent occurrence with a first person plural NP1, as in *women xuexiao* `our school', *women jia* `our family', and *women Zhungguo* 'our China', the main NP1 factor which promotes *de* omission being proximity to ego.

Also puzzling is the status of abstract Ns. These have the highest incidence of *de*, yet in their semantic relation to the verb they often parallel body parts, as in

(5) ni wanjiu le ni de longyu
you save PFV you ASSOC honour 'You saved your honour.' (PFV = perfective aspect)

That is, personal characteristics like one's weight, attitude and emotions are just as intrinsically relational as other categories traditionally considered inalienable, although these traits can, like body parts, be presented just for their own sake, with the owner either backgrounded or non-specific. The indeterminate status of abstract nouns is confirmed by the different treatments which they receive in other languages. In the Australian language Yidiɲ, a person's smell, his name, and his language can be juxtaposed to their possessor, just like body parts (Dixon (1977:261,305)). In French, the relative pronoun *dont* may occur with two nouns linked to it, of which the second must be inalienable, but in a sense wide enough to include abstract nouns like *décision* and *attitude*, as discussed in Tellier (1991).

Equally striking is the high ranking of spatial orientation, which Mandarin signals with locative postpositions functioning as Ns. Spatial orientation terms have generally been neglected or excluded from inalienability (cf. Wierzbička (1979)) because they a) don't have N status in many languages, at least synchronically, and b) they occur usually with inanimates. By the maximally broad definition of inalienability as intrinsic relationality, they are excellent candidates. However, the associative phrase was the only Mandarin structure examined for this paper in which they had notable incidence.

Traditionally, associative *de* has served as the iposs benchmark in Mandarin. This is not surprising, since it is the only structure where possessor and possessum are in a tight morpho-syntactic configuration. Chappell and Thompson show, however, that iposs is far from being the only or even primary criterion determining the presence of *de*.

2.2. Inferable possessors

Mandarin allows a possessor that has already been established in the discourse to forego explicit mention in the phrase headed by the possessum, as in

(6) wo ju qi le shou
I raise PFV hand 'I raised my hand.'

and

(7) daifu dao Shanghai kan erzi qu le
doctor to Shanghai see son go PFV
'The doctor went to Shanghai to see his mother.'

In (6), the most likely interpretation would inferentially link the hand to the first person subject as its possessor. In (7), inalienable status of *erzi* 'son' likewise would favour an inferential link with the subject. With body parts and social relations as possessa, such inferencing is routine, in contradistinction to identical structures with alienable objects, where possession is inferable but constitutes the marked interpretation. Just as the English sentence *He checked the suitcase* could imply that the subject is the suitcases's owner, the Mandarin example

(8) ta fang di le qingzi
3SG lower PFV mirror 'She lowered the/her mirror.'

allows the possibility that the mirror belongs to the subject, but this is a less likely inference than with an inalienable.

Data collected from the volume *Contemporary Chinese Fables* (1990), written in a style close to spoken present-day Mandarin, shows the preponderance of social relations

and body parts with inferred possessors, as seen in Table 1:

TABLE 1: Possessa with inferable possessors

Category	N
Body parts:	11
Social relations (including kin)	10
personal effects	3
spatial orientation	2
inanimate parts	1
abstract	1

The possessors' location is within two clauses of the possessum, just as Chappell (1995) found for double-sujet Ss. This preliminary sample, admittedly too small to establish significance, suggests that body parts and social relations occur as implicitly possessed with roughly equal incidence and that implicit possession is at least three times more likely to involve them than other sub-classes.

Inferable possessa reflect an interaction of syntax and pragmatics. Syntactically, they arise if the possessor and subject are co-referential, as in (6) and (7). If possessor and subject don't match, an associative phrase is normally required:

(9) wo bu de bu bao zha le ta de shou bi
I had to bandage PFV 3SG ASSOC arm 'I had to bandage his arm.'

However, if the act is something unexpected, the *de* phrase co-occurs redundantly with the subject:

(10) wo yong chou zhua qu wo de tou
I use hand grab take I ASSOC head 'I grabbed my head with my hand.'

This factor of expectation, of routineness, also explains the corollary, i.e. if the act stereotypically involves someone acting on another person, the possessor may be omitted, as when a customer says to a barber:

(11) qing ba (wo de) huzi ti diao
Please BA (I ASSOC) moustache shave off 'Please shave off my moustache.'

A special case of implicit possession is the verb-object compound, analogous to noun incorporation in Amerindian Languages (cf. Mithun (1984)). Like the latter, Mandarin encodes various stereotypical acts like tooth-brushing and hair-cutting as more-or-less fixed units, the verb and object manifesting nontheless varying degrees of separation (Li/Thompson (1981:73)). As regards iposs, the most noteworthy feature of such compounds is the impossibility of adding a *de* phrase to the possessum, e.g.

(12) ta di xia le (*ta de) tou
3SG bow PFV (*3SG ASSOC) head 'She bowed her head.

vs (8), which could have the genitive *ta de* added to *qingzi* 'mirror'.

(12) contrasts with freely-formed verb + inalienable object predicates, which admit an optional *de* phrase, if the pragmatics allows. This is the case in (6), where the genitive

could be added for contrastive reasons, although such optionality is not to be taken as free variation. The *de* phrase, as an overt marking of possession, can serve to make the body part salient or, conversely, to clarify the possessor in the case of more than one potential owner. Contradictory as these purposes may seem, they share the property of downplaying the inalienable nature of the body part: syntactically the possessor occupies a subordinate role as a modifier within the possessum phrase. The absence of an associative phrase sets up the body part as a stereotypical inalienable, whose link to its owner is to be taken for granted. The difference comes out especially with benefactive *gei* phrases:

(13) yao wo gei ni ba tou fa su ga ma?
wish I for you BA hair comb dry QUES 'Shall I comb your hair dry?'

The expression of the possessor through its own benefactive phrase stresses the impact of the event on the owner. The part is linked to the possessor inferentially, as expected for an inalienable when the possessor is already given in the nearby discourse. An associative phrase would be added to the possessum in (13) only to single out the addressee from one or more other potential owners.

With subject inalienables, syntax, semantics and pragmatics all contribute to determine whether the possessor will be inferable or overt. (14) is a follow up to the context "When I came home yesterday, my daughter was crying and holding her arm":

(14) ta de gebou zhou zi le (ta de) shouwan quan hong le
3sg ASSOC elbow purple PFV (3sg ASSOC) wrist all red PFV
'Her elbow was bruised and her wrist was all red.'

The topic established in the preceding S is the speaker's daughter. In (14), the first body part, the elbow, requires an associative phrase, while the second, the wrist, can optionally occur with zero anaphora. If pragmatics alone sufficed to explain possessor-marking, we would expect zero anaphora in both cases because the possessor has topic status. If just syntax were the key, an associative phrase would be required for both elbow and wrist because both are subjects. The sequence associative phrase --> zero anaphora when there is more than one body part suggests a division of labour: syntax determines the obligatory possessor marking for the elbow by virtue of the latter's sentence-initial position, while the wrist may take zero anaphora because its possessor has already been specified within the same S, even though 'wrist' occurs in a different clause.

Kin terms, on the other hand, do allow zero-marking of possessor when S-initial, as in the following, taken from the fable *Taking Things to Heart*:

(15) xiao arzi beishu lou le yiju.
little son recite miss PFV sentence 'His little son missed a sentence.'

(16) bujiu laopo zou niangjia hui lai
soon wife walk parents-home back come
'Soon afterwards his wife returned to her mother's.'

The behaviour of subject inalienables must therefore also take into account the body part/kin semantic opposition.

Here are the main points regarding implicit possessors:

a) in the absence of a *de* phrase overtly marking the possessor, there is a default inference of assuming the owner of a non-subject inalienable to be the subject of the sentence. This default can be overridden by pragmatics, i.e. if the event is unexpected, a

redundant *de* phrase occurs and, conversely, a stereotypical event may allow zero anaphora even if subject and possessor don't match.

b) Body parts and social relations manifest zero-marking of possessor with roughly equal incidence, although only the latter sub-type may so occur sentence-initially.

c) As with associative phrases, inferable possessors are not necessarily inalienable.

2.3. Possessors as topics

We will now look at what have been called "double subject" constructions, i.e. two juxtaposed NPs at the beginning of an S. The second may have an inalienable relation to the first:

(17) ta duzi e
3SG stomach hungry 'He's hungry.'

(18) Zhangsan nu pengyou duo
Zhangsan girl friend many 'Z. has lots of girlfriends.' (Li/Thompson (1981:92))

I shall assume, along with other typologists, that such structures reflect not two subjects, but rather a topic followed by a subject. There is solid evidence that Chinese is a topic-prominent language. Li/Thompson (1981:85) state that most arguments, as well as VPs and entire clauses, can be topics, i.e. occur in sentence-initial position as a framework for the main predication.

Since topic possessors are formally and functionally distinct from genitives (associatives), the former should not be analyzed as "reduced" versions of the latter. According to Teng (1974:463), in a topic possessor S, the obligatorily stative or intransitive predicate refers normally to "temperament and physical condition, and very rarely physical description", which is typically conveyed by an associative phrase. Thus, (17) contrasts with the genitive in

(19) ta de duzi hen yuan
3SG ASSOC stomach very round 'His stomach is very round.'

because the latter S describes the stomach rather than predicating a physical state that affects the whole person. Chappell (1995) gives an overview of the considerable work that has pointed out semantic, syntactic and prosodic distinctions between genitive and topic possessors. For instance, only the genitive may present the possessum as detached, while an adverb, a rhetorical particle and an intonation break may intervene between possessor and possessum in topic but not genitive structures.[4]

As for iposs sub-types, the oral data from Chappell (1995), summarized in Table 2, show body parts to be more numerous than kin:

TABLE 2: Breakdown of NP2 of Double Subject S's, from 3 corpora in Chappel (1995)

Abstract	**Body Part**	**Kin**	**Institution**
gezi 'build.'	xin 'heart.'	nür 'daughter'	Zhongguo 'China'
ren 'build.'	jiao 'foot.'		
dongzuo 'movement.'	lian 'face.'		
ger 'build.'	erduo 'ear		
nianji 'age.'			
xuexi 'study.'			
shen 'body', 'life'			
sheti 'body'			
weidao 'taste' (of ice cream)			
xinqing 'feelings'			

Abstract nouns display reverse patterning compared to associative phrases: they are the least likely category to allow omission of *de* in associative phrases, while in Chappell's corpora they constitute the most frequent inalienable sub-type for double subject Ss.[5] Chappell excludes clothing and other material possessions from the double subject construction, but my informants accepted

(20) nei ge haizi yifu dou po le
that CL child clothes all torn CRS (CRS = Currently Relevant State; CL = classifier)
'That child, his/her clothes are all torn.'

and

(21) ni che zi hen zang
you car very dirty 'Your car is very dirty.'

Mandarin topics extend far beyond iposs: the link between the topic and the rest of the S may have nothing to do with possession, and even when there is inferred possession, N2 can be alienable, as in the 2 preceding Ss. Even if we consider material possessions as peripheral exemplars of inalienables, topics have at most a tangential association with iposs.

2.4. Passive of bodily effect

Chappell (1986) proposes the following structure for the PASSIVE OF BODILY EFFECT (PBE):

$$NP1_{undergoer}\text{-BEI-}NP_{agent}\text{-V-ASP-}NP2_{?body\ part}$$

She defines PBEs via the following syntactic criteria:

1. Only PBE Ss have a corresponding regular BEI passive where body part is subject and possessor is juxtaposed to it via a *de* phrase. Compare:
   (22) ta bei Li Si da- wai le bizi.
   3SG BEI Li Si hit: crooked PFV nose
   'He was hit on the nose by Li Si so that it became crooked.'

vs

(23) ta de bizi bei Li Si da- wai- le
3SG ASSOC nose BEI Li Si hit: crooked PFV
'His nose was bent out of shape by Li Sì.'

In spite of a paraphrase relation, these two Ss manifest different syntactic, semantic and pragmatic behaviour, as discussed below.

2. PBEs require a resultative verb compound, where the first element pertains to possessor (whole) and second indicates the resulting state of the body part, e.g. *jiu-zhu* 'grab:hold' (in literal or idiomatic sense of 'seize upon'), *da-shang* 'hit:wounded', *dong-huai* 'freeze:damage'.
3. The perfective aspect marker *-le* is obligatory. My informants indicate that the experiential *guo* can also occur.
4. The body part noun can't be modified, except by nonspecific measure words *yi* 'one' and *shuang* 'both'. If these are present, the necessarily adversative act must be of a serious nature. I have ascertained that other distinguishing adjectives like 'right'/'left' are also admissible:

(24) wo bei Li Si da-wai le you shou
I BEI Li Si hit-out of shape PFV right hand
'I had my right hand bent out of shape by Li Sì.'

To test this claim further, I asked two informants to give the Mandarin equivalent of 'I had a finger grazed/scratched/bruised/split open/cut off by a threshing machine'. They allowed three non-compound PBEs (*ca* 'graze', *gua* 'scratch', and *qie* 'cut, split open') in the same syntactic frame:

(25) wo bei jiqi ---- le yi xia / *yi ge zhitou
I machine ---- PFV one time one CL finger

As Chappell predicts, the most serious event, *qie-diao* 'cut off', results in reversed grammaticality of the quantifier for the body part:

(26) wo bei jiqi qie-diao le *yi xia / yi ge zhitou
I machine cut-drop PFV one time / one CL finger

The unexpected result is that non-compound verbs can appear in PBEs, contrary to claim 2.

Here are the semantic requirements which Chappell proposes:

1. The event must be adversative.
2. The whole-part relation is seen in the compound verb requirement, the 1st part involving the possessor, the 2nd the possessum, with both adversely affected. If the body part is subject of a *bei* passive, with its possessor given in a *de* phrase, the verb does not have to be compound. The body part is then presented for its own sake, rather than as part of a whole, and can therefore occur with a descriptive adjective.
3. The post-verbal noun must be a body part. I have nevertheless detected parallel instances with inanimate part-whole relations:

(27) zhe ke shu bei fengbao chui-guang le yezi
this CL tree BEI storm blew-bare PFV leaves
'The tree had its leaves stripped away by the storm.'

(28) zhe zhang zhuozi bei Li Si ju-diao le yi tiao tui.

this CL table BEI Li Si saw-drop PFV one CL leg
'This table had one of its legs sawed off.'

More significantly, concrete nouns that are not normally thought of as inalienable but typically have an owner are also to be found in PBEs:

(29) ta bei na ge gongsi pian-zou le san zhuang fangzi.
3SG BEI that CL company cheat-away PFV three CL houses
'He lost his three houses through that company's dishonesty.'

(30) ta bei Li Si qiang le {yi da bi qian / yi ge qian bao}
3SG BEI Li Si rob PFV {one big CL money / one CL wallet}
'He was robbed by Li Si of {a lot of money / a wallet}.

(31) ta bei Zhang San che-po le qunzi
3SG BEI Zhang San tear-break PFV skirt
'She had her skirt ripped by Zhang San.'

(32) Xiao Mei bei Li Si da-diao le maozi
Xiao Mei BEI Li Si hit-off PFV cap
'Xiao Mei had his cap knocked off by Li Si'.

Such exceptions to the body part stipulation are not surprising when we consider that languages commonly extend inalienable structures to include items like clothing that, socially at least, belong just as much to the personal domain as do body parts. According to Chappell (personal communication) abstract personal sphere Ns like reputation, soul, and emotions cannot occur in PBEs as postverbal nominals. Whether or not this constraint is due to their non-visible nature, it is clear that we face an under-determination of semantic limits on the inalienable, just as with previous structures examined.[6]

2.5. Discontinuous possessives

I will now turn to what Teng (1974) calls the DISCONTINUOUS POSSESSIVE CONSTRUCTION (DPC): $NP1_{undergoer}$-V-ASP-$NP2_{?inalienable}$

For example:

(33) ta xia le yi zhi yanjing (Teng (1974:464))
3SG blind PFV one CL eye 'He became blind in one eye.'

Like PBEs, DPCs consist of a initial topic-possessor, i.e. an entity affected by what happens to the sentence-final possessum, the patient of a one-argument verb. The resemblance between DPC and SVO sentences is superficial: even though both display an NP on either side of the verb, only with SVOs do both NPs have argument status.[7]

As with topics (Section 2.3), the preverbal NP in DPCs is not necessarily possessor. An alternative interpretation for this N is locative, as in

(34) cun (li) si le yi ge ren
village (LOC) die PFV one CL person 'A person died in this village.'

and

(35) zhe jian gua zi (shang) diao le liang ge kouzi
this CL shirt (on) drop PFV two CL buttons
'There are 2 buttons missing on/from this shirt' (Guo (1990))

Whether the initial NP is construed as affected entity or locative depends only in part on the absence or presence of the locational postpositions *li* and *shang*. Some DPCs with

inanimate initial NPs can receive locative readings even without such postpositions, e.g.

(36) dong wu yuan pao le yi zhi gou xiong
zoo run PFV one CL bear
'The zoo lost a bear', 'A bear ran away from the zoo' (Guo (1990)).

As with other inferentially possessive structures, DPCs give no evidence of a systematic, transformational-type relation with genitives. Teng (1974) argues against deriving one from the other, on the following grounds:

1. Different topics are involved. A genitive answers the question "what happened to the possessum?" while DPCs address what happened to the possessor, just as with possessors of double subject Ss.
2. An adverb has different scope with each structure. In the DPC
   (37) ta you si le yi ge erzi
   3SG again die PFV one CL son 'He lost another son.'
   the second death involves another son, but in the genitive
   (38) ta de yi ge erzi you si le
   3SG ASSOC one CL son again die PFV 'A son of his died again.'
   the same son dies twice.
3. DPCs contain a presupposition that is lacking in genitives. In
   (39) Kongzi si le houyi
   Confucius die PFV descendant 'Confucius' descendant died (on him).'
   the pragmatic strangeness is due to the presumption that Confucius is still alive, in order to be affected by his descendant's death, as opposed to the unexceptional

(40) Kongzi de houyi si le
Confucius ASSOC descendant die PFV 'Confucius' descendant died.'

4. A DPC may lack a genitive equivalent, as with the idiomatic
   (41) ta pao diao-er le
   3SG run tone-DIMIN PFV 'He goes beyond the norm in his singing'--> says something irrelevant (Guo (1990))
   or else the genitive may be preferred because it renders the possessum salient:
   (42) ta de yan jing shi run le
   3SG ASSOC eye wet moist PFV
   'His eyes become wet.' (from e.g. excitement or sadness) (Guo (1990))

Guo (1990) notes that a genitive phrase cannot be placed inside the postverbal NP. Her data have only numerical modifiers (numbers, expressions of quantity), but I have elicited the following data with descriptive adjectives:

(43) Li Si si le lao fuqin.
Li Si die PFV old father 'Lisi's old father died on him.'

(44) ta si le xiao erzi.
3SG die PFV little son. 'His little son died on him.'

(45) qu-nian ta si le yi ge yaba erzi.
last-year 3SG die PFV one CL mute son 'His mute son died on him last year.'

This is the major difference between DPCs and PBEs, which allow only adjectives in the postverbal NP that are distinguishing (i.e. restrict the referent) rather than descriptive (i.e. give further, incidental information about the referent) .[8]

The contrast between genitives and DPCs may be summed up as follows: the genitive explicitly signals the (admittedly polysemous) possessor relation, while a DPC simply implies it, while also conveying that the initial NP is, as we would expect for a topic, affected by what occurs in the sentence core, and especially by what happens to the postverbal NP.

We will now examine the semantics of NP2. A perusal of the data in Guo (1990) confirms that DPCs take in not only core inalienables like body parts and kin terms, but also part-whole relationships among inanimates, cf. (35) and:

(46) xing li fang dao le yi mian qiang
luggage room fall PFV one CL wall
'A wall in the luggage room fell in.'

The postverbal noun can also belong to peripherally inalienable classes like abstract characteristics:

(47) ta bian piqi le
he change temper PFV 'His mood changed.'

personal possessions:

(48) xiao qi diu le yi ge jin jie zhi
little qi lose PFV one CL gold ring 'Little Qi lost a gold ring.'

and even items normally treated as alienable, like food:

(49) ta sou le wu jin mantou
3SG stale PFV 5 pound steamed bread
'5 lbs. of steamed bread went stale on him.'

The semantic nature of NP2 thus goes well beyond inalienable status, and furthermore, the relation between it and NP1 need not even be one of possession.. Naturally, the inalienable nature of body parts and social relations gives rise to strong inferences of possession, but with other nouns such inferences are context-dependent, as in

(50) ta si le si ke tao shu
3SG die PFV 4 CL peach tree '4 peach trees died on him.'

where the 3SG referent could be a gardener rather than the peach trees' owner. Such indeterminacy for possessor construal has analogues in European languages, cf. the equivalent of (50) in Spanish:

(51) Se le murieron cuatro melocotoneros.
REFL 3SG-DTV die-past-3PL 4 peach trees
'4 peach trees died on him.'

where the referent of *le* could likewise be someone affected by their death, not necessarily the owner.[9]

2.6. Retained object construction

Lü (1948) and Li/Thompson (1981) treat the RETAINED OBJECT CONSTRUCTION (ROC), a three-argument structure which also exhibits a discontinuous possessor:

$$\text{NP-BA-NP1}_{\text{undergoer}}\text{-V-ASP-NP2}_{\text{?inalienable}}$$

For example:

(52) wo ba ta bang le liang zhi jiao (Li/Thompson (1981:470))
I BA 3SG tie PFV two CL foot 'I tied up his/her 2 feet.'

This is related to Ss with only one object, which is pre-posed and preceded by *ba*:
(53) wo ba cha bei nong po le
I BA tea cup make broken PFV 'I broke the teacup.'
For Li/Thompson (1981), a *ba* NP is generally possible when the object is definite or generic, and when something happens to it. Retained object Ss like (51) have two objects, the first accompanied by *ba* and preposed, the second post-verbal. There is often a part-whole relation between the two nouns, with the semantic range of NP2 appearing almost as extensive as with DPCs. In addition to body parts, we note, among examples from Li/Thompson (1981), inanimate parts:
(54) ta ba juzi bo le pi
3SG BA orange peel PFV skin 'He peeled the skin from the orange.'
personal characteristics:
(55) wo ba ta erzi huan le xingming
I BA 3SG son change PFV name 'I changed his/her son's name.'
partitives:
(56) wo ba bimi xielou le bu shao
I BA secret leak PFV not little 'I leaked quite a bit of the secret.'
and locatives:
(57) laoshi ba xuesheng gan-chu le xuexiao (Thompson (1973:210))
teacher BA student expel PFV school 'The teacher expelled the students.'
Cheng/Ritter (1988) take the ROC to be a benchmark of iposs in Mandarin. Arguing that the two objects manifest a part-whole relation and that descriptive modification of the post-verbal noun is impossible, they conclude that the latter is non-referential, i.e. the post-verbal noun in D-Structure is in a small clause with an empty category co-referential with the *ba* noun. The small clause raises onto the verb, forming a complex predicate, a process analogous to noun incorporation in Amerindian languages, i.e. (54) would be construed as something like 'I skin-peeled the orange'.

Cheng/Ritter's analysis presents several problems. First, distinguishing adjectives do arise with the post-verbal noun, as in (52), thereby casting doubt on the claim of non-referentiality. It is difficult to see how the full NP *liang zhi jiao* 'two feet' could be incorporated into the verb.

Secondly, many retained object Ss fail to display a possessive relation, e.g. (57) and
(58) ta ba taizi da le la (Li/Thompson (1981:471))
3SG BA table apply PFV wax 'S/He applied wax to the table.'
It is far from obvious how the wax might be an "inherent part of" the table.

Thirdly, it is possible to leave the *ba* noun implicit, as in
(59) wo bo le pi le (Cheng/Ritter (1988))
I peel PFV skin PFV 'I peeled the skin.'
Contrary to what Cheng/Ritter claim, it is not necessary for *pi* to be interpreted as detached if a *ba* phrase is missing; this could well be an instance of zero anaphora for the possessor.

What, then, is the relation between the two objects? Thompson (1973) contends that the *ba* NP is the semantic direct object of the verb plus whatever follows, whether an "inner" NP object or an extent construction like

(60) ta ba duzi ku de dou teng le
3SG BA stomach cry extent all ache PFV
'He cried so much that his stomach hurt.'

such that in both cases the entire segment after the *ba* NP indicates what the subject did to it. There is perhaps a semantic resemblance to Cheng/Ritter's complex predicate hypothesis, but Thompson's hypothesis is more plausible, since the postverbal constituents retain too much syntactic complexity to undergo incorporation as it is usually understood (cf. Baker (1988)).

As in the other structures we have examined, the NP1-NP2 relation in an ROC displays but contingent inalienability: only if NP2 is of a certain nature, such as a body part or inanimate part-of-a-whole will there necessarily be an inherently-possessed link. The wide semantic range of NP2 means that, again, iposs is but one possible inference, albeit a highly stable one if the nature of NP2 allows.

2.7. Semantic heterogeneity of NP2

Our examination of six constructions confirms that Mandarin permits considerable variability in semantic sub-types of NP2. In particular:

1. None of the 6 constructions are limited to body parts or kin, arguably the prototypical inalienable possessa. All can involve body parts, and all except ROCs and PBEs exhibited kin terms.
2. Even with zero-marked associative phrases, the structure commonly associated with inalienability in Mandarin, the core inalienable categories (spatial orientation, kin, body parts) accounted for only 59% of tokens in Chappell/Thompson (1992).
3. Teng (1974) has body parts in 21 of 33 tokens, but one would expect such dominance from his definition of double nominatives. If we consider the latter to be a semantic sub-type of topic Ss, body parts no longer predominate (cf. section 2.3).
4. For PBEs, all data in Chappell (1986) involve body parts, but I have found other acceptable Ss with personal effects, abstract and inanimate part NP2s (see page 10).
5. The DPC data in Guo (1990) has body parts and kin accounting for 9 and 4 of 41 tokens respectively. The remaining tokens are split among sundry categories (domestic animals, personal possessions, emotions and other abstract properties, parts of inanimate objects, etc.), of which the most numerous are abstract nouns with 7 tokens.
6. The analysis of *ba* in Thompson (1973) has inanimate "body parts" (e.g. bolt of a door, ceiling of a room, ?price of a book) in 6 of 19 Ss that otherwise manifest highly disparate semantic categories among NP2s.

Overall, the most frequently arising sub-types are body parts and kin, but neither has unequivocal dominance, either with respect to each other or with respect to other sub-types.

3.0. Conclusion

3.1. Iconicity revisited

Haiman's iposs data all involve possessors and possessa within the same phrase. The issue of linguistic distance becomes more complicated if we consider cases where the possessor occurs at the clause level, as in Indo-European languages which can manifest the

possessor as a dative, structurally autonomous from the possessum. If taken at face value, the hypothesis immediately fails when confronted with French data like

(61) Je me suis lavé les mains. 'I to-me washed the hands.'

vs

(62) J'ai lavé mon chien. 'I washed my dog.'

The possessor of *mains* is located much farther from the possessum than the possessor of *chien*, contrary to the iconicity prediction. One way to preserve the hypothesis would be to deny the clitic *me* of (61) possessor status on an equal footing with *mon* of (62). In fact, there is good evidence that clitic "possessor"-datives in Romance convey possession inferentially rather than as an explicit part of their semantic make-up (cf. Roldán (1972), García (1975), Kliffer (1983) for Spanish; Kayne (1975), Kliffer (1984), Spanoghe (1995) for French). For instance, the clitic arguably conveys affect or involvement in the verbal process as its semantic invariant, while the possessor reading is sometimes subject to cancellation. The possessive adjective, on the other hand, conveys possession invariantly. The Chinese data suggest a parallel semantic distinction between mono-phrasal and discontinuous expression of possession, i.e. further evidence that Haiman's iconicity hypothesis would apply only to mono-phrasal data.[10]

Mandarin offers but one such clear-cut case of mono-phrasal expression of possession: the presence vs absence of associative *de*, where inalienables, notably expressions of spatial orientation and kinship, are more likely to arise without the associative marker, i.e. juxtaposed to the possessor. Even here the opposition stems from more than a ±inalienable distinction: numerous other factors regarding both NP1 and NP2 also determine the likelihood of *de* omission, as pointed out in section 2.1.

Inferable possessors and possessor-topics offer weaker support: with the former there is cognitive evidence that the implicit possessor is maximally "close" in memory to the possessum, in view of its easy recoverability, but this is a question of cognitive rather than linguistic distance and it is not restricted to inalienables. Topics may or may not be linked to an inalienable possessum, a fact which, again, neither supports nor refutes iconicity.

The three structures where NP1 and NP2 are discontinuous (PBEs, DPCs and ROCs) are apparent counter-examples to the hypothesis, since the distance between possessor and possessum, in cases where that is indeed what NP1 and NP2 constitute, is clearly greater than with the genitive structure that commonly involves alienables. However, as in European languages, such structures present possession (definable simply as an association, to enable direct comparison with associative phrases) only as a contextual possibility, not as the invariant, encoded relation found in Mandarin only within a single NP. Hence, it is doubtful that they are pertinent for Haiman's hypothesis as he conceived it. Mandarin, then, confirms the iconicity-based explanation of iposs, but with the same caveats pointed out for European languages where the possessor can be external to the possessum phrase.

3.2. Prototypes

Througout the discussion I have stressed the wide-ranging semantic character of NP2, the possessum. This diversity is the reason for prefacing 'inalienable' with a question mark in the formula given for each structure. Cross-linguistically (cf. Nichols (1988), Seiler

(1983), Sherzer (1976), Spanoghe (1995)), iposs involves most often body parts and kin terms, such that it is impossible to say with statistical confidence which category of these two qualifies as THE iposs archetype. Mandarin constitutes an intra-linguistic case in point of such vacillation, with kin terms predominant in associative constructions, body parts in PBEs and neither category in the other structures examined. Mandarin is also unexceptional in its treatment of personal effects and abstract qualities: just as these display high variability across languages with respect to their inalienable status, in Mandarin they can manifest inconsistency from one structure to another, e.g. abstract tokens rank lowest for *de* omission, i.e. low inalienability, but dominate the mini-corpus of double subject data in Chappell (1995).

Haiman (1985) proposes to treat such variation in iposs sub-types via an implicational hierarchy, but the drawback of such a model is its over-determination. Not only is it empirically unclear whether body parts or kin terms should be at the top, but the ranking of lower categories is also uncertain: the cross-linguistic data leave us unable to place with confidence, for instance, personal effects above or below abstract properties. The one claim that the data gathered so far allow us to make is that iposs, where morpho-syntactically signaled, must include at least body parts or kin terms, the remaining sub-types being optional both within and across languages. A prototype model[11] might accommodate such variation more easily, i.e. the fence-sitting classes like abstract qualities would occupy the periphery, while kin and body parts would share core status. The question as to which of these two is the best exemplar is perhaps a red herring: the nature of kin terms sets them aside from all other iposs sub-categories: they are the only inalienables that are animate and therefore significantly higher in topicality and inherent discourse prominence. They never involve a part-whole relation[12], and can never be presented as devoid of a possessor (although the latter can be generic, backgrounded or eclipsed), unlike body parts, which are subject to detachment, as in the case of animal parts used for food.[13] These fundamental differences might underlie the inconclusive ranking of body parts and kin terms vis-à-vis inalienability. A solution incorporating prototypes, however, will need refining and confirmation from further work both across and within languages.

Notes

1. This paper is an extension and partial reworking of the Mandarin component from Kliffer (1995). I would like to thank my informants Zhang Ning, Shana Hu, Xu Liejong, Chu Xiao-Quan and Frank Miao for their patient access to their intuitions. I am also grateful to Hilary Chappell and Zhang Ning for discussions of theoretical issues. This work was made possible thanks to a travel grant from the Arts Research Board of McMaster University. All errors and omissions are my own responsibility.

2. Abbreviations used:
   ASSOC = Associative
   CL = Classifier
   CRS = Currently Relevant State
   DPC = Discontinuous Possessor Construction
   IPOSS = Inalienable Possession
   PBE = Passive of Bodily Effect
   PFV = Perfective Aspect
   ROC = Retained Object Construction

3. See Massam (1993) for a discussion of possession as modification.

4. For semantic differences, see Teng (1974:468), Li/Thompson (1976:481), and Tsao (1979:34, 126-129). For interposition of adverbs, see Mullie (1933), Teng (1974:458) and Modini (1981:10). For intonation breaks and rhetorical particles, see Chao (1968), Li/Thompson (1976), Jeng (1978:328), Tsao (1978:185) and Tsao (1979:87). These possibilities of lexical and prosodic insertion suggest that we cannot really talk of possessor/possessum juxtaposition and they provide a formal means of distinguishing topics from associative phrases lacking *de*.

5. Examples of abstract Ns from Chappell's corpus include: gezi 'build', ren 'build', dongzuo 'movement', ger 'build', nianji 'age', xuexi 'study', shen 'body, life', sheti 'body', weidao 'taste' (e.g. of ice cream), and xinqing 'feelings'.

6. As with double subjects, partitives too can arise in a structure similar to PBEs. See Chappell (1986, note 4).

7. See Guo (1990) for constraints on the syntax of NP2. Briefly, if countable, it must co-occur with either 1) the sentence-final rhetorical particle *le* indicating a Currently Relevant State (CRS, Li/Thompson (1981)) or 2) a quantifier phrase. Guo also details the semantics of the verb, which usually involves an adversative event, but unlike verbs of PBEs, can be neutral (e.g. *bian* 'change') or positive (e.g. *zheng jia* 'increase').

8. The one lexical constraint detected pertains to *si* 'die', which requires that NP2 be an immediate relative, although a coordinate structure is possible where the second NP2

violates this requirement:

(i) ta si le fuqin you si le pengyou
3SG die PFV father also die PFV friend
'His father died on him and so did his friend.'

9. Massam (1993), among others, argues that the grammatical label of possession corresponds to no unitary semantic concept, i.e. ownership is but one of several possible interpretations. The Mandarin evidence shows that ownership is nevetheless at the prototypical core of possession: a gardener could use a *de* phrase referring to peach trees he doesn't own, yet he wouldn't dare use the genitive *wo de tao shu* 'I DE peach tree' in the presence of their owner, who would surely construe it as a claim of ownership. Taylor (1989:202) gives criteria for prototypical possession that dove-tail with the everyday notion of ownership, e.g. a prototypical possessor is human, has rights over the possessed by virtue of purchase, donation or inheritance, and has spatial proximity to the possessed.

10. Haiman did not intend linguistic distance to apply only within a phrase, as attested by his discussion of wh-movement, causatives, and complementation.

11. By prototype (ptp) is meant the approach to categorization proposed by Rosch (1973, 1978) and developped in Langacker (1987), among others. Ptp analysis handles membership in a class as scalar rather than binary, i.e. tokens of the class exhibit degrees of representativity, ranging from best exemplar status to peripheral. Ptp theory allows for probabilistic rather than absolute predictions. It incorporates the notion of ill-defined limits, as proposed in Hall (1968), i.e. in place of a boundary, it assumes gradually decreasing probability of membership, approaching but never reaching zero. See Taylor (1989) for an overview of prototype theory in linguistics, and Tsohatzidis (1990) for papers debating its merits.

12. We might view kin terms as linked to a superordinate FAMILY and thereby as parts of a whole, but no such link is obvious with other social relations like *friend* and *neighbour*.

13. See Spanoghe (1995:41-45) for an overview of the body parts vs kin terms issue.

REFERENCES

-- (1990). *Contemporary Chinese Fables*. Beijing: Chinese Literature Press.

Baker, Mark C. (1988). *Incorporation: A Theory of Grammatical Function Changing*. Chicago: University of Chicago Press.

Chao, Yuen Ren (1968). *A Grammar of Spoken Chinese*. Berkeley: University of California Press.

Chappell, Hilary (1986). The Passive of Bodily Effect in Chinese. *Studies in Language*. 10-2. 271-296.

Chappell, Hilary & Thompson, Sandra (1992). The Semantics and Pragmatics of Associative 'DE' in Mandarin Discourse. *Cahiers de Linguistique Asie Orientale*. 20-2.

Chappell, Hilary (1995). Inalienability and the Personal Domain in Mandarin Chinese Discourse. In: H. Chappell & W. McGregor (eds.), *The Grammar of Inalienability: a Typological Perspective on Body Parts and the Part-Whole Relation*. Berlin: Mouton de Gruyter.

Cheng, Lisa & Ritter, Betsy (1988). A Small Clause Analysis of Inalienable Possession in French and Mandarin. In: James Blevin & Juli Carter (eds.), *NorthEast Linguistics Conference 18*. Amherst: GLSU, University of Massachusetts.

Dixon, Robert M. W. (1977). *A Grammar of Yidiny*. Cambridge, England: Cambridge University Press.

Fillmore, Charles (1968). The Case for Case. In: E. Bach and R. Harms (eds.), *Universals in Linguistic Theory*. New York: Holt, Rinehart & Winston. 1-88.

García, Érica (1975). *The Role of Theory in Linguistic Analysis*. Amsterdam: North Holland.

Guo, Jimao (1990). Lingzhu Shubin Ju [Sentences with subject and object in possessive relation]. *Zhongguo Yuwen*. [Chinese Language]. 1:24-29. Beijing: China Social Sciences.

Haiman, John (1985). *Natural Syntax: Iconicity and Erosion*. Cambridge, England: Cambridge University Press.

Hall, Robert A. Jr. (1968). *Essay on Language*. New York: Chilton Books

Jeng, Heng-hsiung (1978). Topic and Subject in Chinese, English and Bunun. In: Robert L. Cheng, Ying-che Li & Ting-chi Tang (eds.), *Proceedings of Symposium on Chinese Linguistics* (2nd edition), 317-348. Taipei: Student Book Co.

Kayne, Richard (1975). *French Syntax: The Transformational Cycle*. Cambridge (Mass.): MIT Press.

Kliffer, Michael (1983). Beyond Syntax: Spanish Inalienable Possession. *Linguistics* 21: 759-794.

Kliffer, Michael (1984). Interpenetration of Linguistic Levels: French Inalienable Possession. *Lingua* 62:187-208.

Kliffer, Michael (1995). Commonalities of French and Mandarin Inalienable Possession. Paper given at the First International Conference in Contrastive Semantics and Pragmatics, University of Brighton, England.

Langacker, Robert W. (1987). *Foundations of Cognitive Grammar*, vol. 1: Theoretical

Prerequisites. Stanford: Stanford University Press.
Lévy-Bruhl, Lucien (1916). L'expression de la possession dans les langues mélanésiennes. *Bulletin de la Société de Linguistique de Paris*. 19:96-104.
Li, Charles & Thompson, Sandra (1976). Subject and Topic: A new Typology of Language. In: Charles Li (ed.), *Subject and Topic*. New York: Academic Press.
Li, Charles & Thompson, Sandra (1981). *Mandarin: A Functional Reference Grammar*. Berkeley and Los Angeles: University of California Press.
Li Ren Jian (1959). Shi ren lin shu xin ding yu dai bu dai 'de' [On the possessive modifiers with and without 'de']. *Yang Shou Shi Fan Xue Yuan Xue Bao* [Journal of Yangshou Teachers' Institute]. No. 2. 35-44.
Lü Xiang (1948). Ba Zi Yong-fa Yanjiu [Studies in the Use of 'ba']. *Zhongguo Weinhua Yanjiu Huikan* [Studies in Chinese Culture]. no. 8, 111-130.
Massam, Diane (1993). The Licensing of Genitives. *Linguistica Atlantica*. 15:115-129.
Mithun, Marianne (1984). The Evolution of Noun Incorporation. *Language*. 60:847-894.
Modini, Paul (1981). Inalienable Possession and the 'Double Subject' Constructions in East Asian. *Cahiers de Linguistique Asie orientale*. 9:5-15.
Mullie, Joseph. M. (1933). Le double nominatif en chinois. *T'oung Pao*. 30:231-236.
Nichols, Johanna (1988). On alienable and inalienable possession. In: William Shipley (ed.), *In Honor of Mary Haas: From the Haas Festival Conference on Native American Linguistics*. 557-609. Berlin: Mouton de Gruyter.
Rand, David & Sankoff, David (1990). *Goldvarb: A Variable Rule Application for the Macintosh*. CRM-1585. Université de Montréal.
Roldán, Mercedes (1972). Concerning Spanish Datives and Possessives. *Language Sciences* 21:27-32.
Sherzer, Joel (1976). *An Areal-Typological Study of American Indian Languages North of Mexico*. Amsterdam: North Holland.
Seiler, Hans-Jakob (1983). *Possession as an Operational Dimension of Language*. Tübingen: Gunter Narr Verlag.
Spanoghe, Anne-Marie (1995). *La syntaxe de l'appartenance inaliénable en français, en espagnol et en portugais*. Frankfurt: Peter Lang.
Taylor, John R. (1989). *Linguistic Categorization: Prototypes in Linguistic Theory*. Oxford: Oxford University Press.
Tellier, Christine (1991). *Licensing Theory and French Parasitic Gaps*. Dordrecht: Kluwer.
Teng, Shou-Hsin (1974). Double Nominatives in Chinese. *Language*. 50:455-473.
Thompson, Sandra A. (1973). Transitivity and some problems with the ba construction in Mandarin Chinese. *Journal of Chinese Linguistics*. 1.2: 208-221.
Tsao, Feng-fu (1978). Subject and Topic in Chinese. In *Proceedings of Symposium on Chinese Linguistics*. Robert L. Cheng, Ying-che Li & Ting-chi Tang (eds.) (2nd edition) Taipei: Student Book Co. 165-196.
Tsao, Feng-fu (1979). *A Functional Study of Topic in Chinese. A First Step Towards Discourse Analysis*. Taipei: Student Book Co.
Tsohatzidis, Savas L. (1990). *Meanings and Prototypes: Studies in Linguistic Categorization*. London: Routledge.

Wierzbička, Anna (1979). *Ethno-syntax and the philosophy of grammar*. Studies in Language 3(3), 313-383.